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EXAMINER

EDWARDS, LINGLAN E

ART UNIT

PAPER NUMBER

2491

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,310	<b>Applicant(s)</b> ALESSI ET AL.	
	<b>Examiner</b> LINGLAN EDWARDS	<b>Art Unit</b> 2491	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 24 January 2012.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 5) ☒ Claim(s) 18-22,24-28 and 34 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 18-22,24-28 and 34 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 14 January 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

### **DETAILED ACTION**

1. This communication is in response to applicant's amendments filed on January 24, 2012. Claims 18-22, 24-28 and 34 are pending.

### **Examiner's Note**

2. Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully suggested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

### ***Response to Arguments***

3. Applicant's following arguments filed on 01/24/2012 have been fully considered but they are not persuasive for the following reasons:

#### **Applicant's Argument:**

The Office Action alleged that McHenry's "a plurality of content groups" (McHenry, paragraph [0013]) correspond to the claimed "set of categories." See Office Action, p. 10. This allegation is incorrect. McHenry's "content groups" do not constitute the claimed "set of categories," because McHenry's "content groups" are defined based on "predefined set of domain content identifiers"

(McHenry, paragraph [0013]), rather than being obtained by "dynamically retrieving a set of semantics from the distributed contents," as recited by amended claim 18. (Applicant's response filed on 01/24/2012, page 11).

**Examiner's Response:**

The examiner respectfully disagrees. At the onset, as noted by Applicant above, McHenry disclosed "a plurality of content groups" which are defined based on "predefined set of domain content identifiers", the "plurality" clearly indicates a "set". Further, a category is a class or group of things possessing some quality of qualities in common, McHenry disclosed the generated content groups "representing respective content sub-sets of the bounded content domain" based on meta-content description produced based on domain content identifiers ( par 0013), i.e., each content group is clearly a category.

4. Applicant's remaining arguments with respect to amended claims have been fully considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 18, 24-28 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **US PG-PUB No. 2003/0115421 A1 to McHenry et al.** (Cited in previous office action, hereinafter **McHenry**) in view of **US PG-PUB No. 2001/0042110 A1 to Furusawa et al.** (hereinafter **Furusawa**), **US PG-PUB No. 2002/0010798 A1 to Ben-Shaul et al.** (Cited in previous office action, hereinafter **Ben-Shaul**) and **US PG-PUB No. 2003/0028564 A1 to Sanfilippo** (Cited in previous office action, hereinafter **Sanfilippo**).

As per **claim 18**, **McHenry** disclosed a method implemented by a control system for controlling distribution of media contents over a network (**McHenry**: Abstract, network edge cache management system), wherein said contents comprise distributed contents to surrogate servers (**McHenry**: Fig. 1, ref 22, 24, content stored in "EDGE SERVER" (multi-proxy caches) are distributed content to the edge servers (surrogate servers)) and remaining contents that have not been distributed to the surrogate servers (**McHenry**: Fig. 1, content at the "ORIGIN SERVER", par 0007, "uncached content" corresponds to the remaining contents), comprising the steps of:

identifying contents eligible for distribution from the remaining contents (**McHenry**: paragraph [0013], "content selection server" identifies content in the bounded content domain);

defining a set of categories (**McHenry**: paragraph [0013], "predefined set of domain content identifiers" each corresponds to a category; also on page 6, claim 1, "selecting" and "grouping");

identifying for each category at least a reference content (**McHenry**: paragraph [0013], also claim 1 text, the meta-content description for each content group is the equivalent of a reference content);

associating, by the control system said identified contents with said predefined categories (**McHenry**: paragraph [0013], “associate respective sets of predetermined cache management attributes with the plurality of content groups”, and further on page 6, claim 15, the ache management attributes “designate corresponding content of said bounded domain for forward or reverse proxy caching by said plurality of network edge cache servers”);

determining, by the control system, an interest value for each category based on statistical data indicative of user interest in the distributed content associated with the respective category (**McHenry**: par 0031, log files and information such as “content and user access frequencies” (i.e. interest value) are used as basis for generating content policy rule bases; and par 0042, content policy rules are used for determining cache partitions (i.e. allocation of different content groups / categories);

identifying, by the control system, at least one category, from said predefined categories, when the distributed contents associated with the category have an interest value that exceeds a threshold (**McHenry**: paragraph [0031], “user access frequencies” corresponds to user interest, as one of ordinary skill in the art would recognize, some type of threshold has to be used for taking into account of the user access frequencies/ interest); and

making at least one of the identified contents associated with said identified category available for distribution at surrogate servers (**McHenry**: paragraph [0013], cache control rule bases are distributed to the edge servers; these are replacement policies, i.e., they identify the new content from the origin server to the edge servers' cache);

**McHenry** disclosed the category which is equivalent of the second category and second threshold recited in the claim;

**McHenry** does not explicitly disclose receiving an input of an interest threshold to be used for identifying content group/category, further, **McHenry** does not disclose the recited first category and first threshold, and "when the distributed contents associated with the first category have an interest value below the first interest threshold", and "removing the distributed contents associated with the first category from the surrogate servers", however, in an analogous art in network content distribution, **Furusawa** disclosed a content distribution system that controls content distributed to surrogate servers (**Furusawa**, Fig. 1, ref. 5, "Child servers" are the equivalent of surrogate servers), and Receiving an input of a first interest threshold (**Furusawa**, par 0090, "previously set threshold value" that is used for determining deletion list) and a second interest threshold greater than the first interest threshold (**Furusawa**, par 0074, "pre-set threshold value" that is used for determining the copying list), and when the distributed contents has an interest value below the first interest threshold, removing the distributed contents from the surrogate servers (**Furusawa**, par

0090); it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of **McHenry** to incorporate the concept of using interest threshold for determining whether to delete content from surrogate servers or provide content to surrogate servers as disclosed by **Furusawa**, to achieve efficient utilization of resources at the server as suggested by **Furusawa** (**Furusawa**, par 0084, 0101);

**McHenry-Furusawa** does not explicitly disclose associating distributed contents and said identified contents based on semantics affinity with said reference content, in an analogous art in network content distribution, **Ben-Shaul** disclosed a method and system that associates distributed contents and identified contents based on semantics affinity (**Ben-Shaul**: paragraph [0063], the example of when user request for a cook book, the server return a list of cook books, and information regarding local food and cookware stores, indicates that contents are associated with predefined categories based on semantics affinity; and paragraph [0072], second version of the content derived from the origin web server); one ordinary skill in the art would recognize that such association method can be equally used for categorizing content at the original server; it would have been obvious to one of ordinary skill in the art at the time of the convention, to modify the system of **McHenry-Furusawa** to further incorporate the association contents based on semantics affinity from **Ben-Shaul**, the motivation being for increased system efficiency and ease of use, because using semantics affinity is just one way of categorization;



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Although **McHenry-Furusawa-Ben-Shaul** does not explicitly disclose using a reference content to categorize additional content based on semantics distance, in an analogous art in network communications, **Sanfilippo** disclosed a method and system where additional content are categorized based on semantics affinity with reference content, where the semantics affinity is calculated as the distance between the additional content and the reference content (**Sanfilippo**: page 10, claim 27 text); it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of **McHenry-Furusawa-Ben-Shaul** to further incorporate the categorizing additional content based on calculation of semantic distance from **Sanfilippo**, the motivation being for increased system efficiency and ease of use, because how to categorize content is just a matter of implementation choice.

As per **claim 24**, **McHenry-Furusawa-Ben-Shaul-Sanfilippo** disclosed the method according to claim 23; although **McHenry-Furusawa-Ben-Shaul-Sanfilippo** does not explicitly disclose using two separate databases for storing classification information, **Ben-Shaul** disclosed using two separate databases for storing content provided (**Ben-Shaul**: paragraph [0072], origin web server storage and edge server storage); it would have been obvious to one of ordinary skill in the art, to also apply the separated databases concept for storing classification information, the motivation being for increased data access efficiency.

As per **claim 25, McHenry-Furusawa-Ben-Shaul-Sanfilippo** disclosed the method according to claim 24, wherein said step of identifying at least one second category comprises the steps of:

defining the second interest threshold to be representative at least of a frequency of user requests for a given distributed content (**McHenry**: paragraph [0031], "user access frequencies"; and **Furusawa**: paragraph [0074]); and

extracting from said first database category information comprising at least one predefined category associated with said given distributed content when said second interest threshold is exceeded (**McHenry**: paragraph [0031], "user access frequencies" corresponds to user interest, and **Furusawa**: paragraph [0074]).

As per **claim 26, McHenry-Furusawa-Ben-Shaul-Sanfilippo** disclosed the method according to claim 24, wherein said step of making at least one of the identified contents associated with said identified second category available for distribution at said surrogate servers comprises the step of:

extracting from said second database contents information related to said at least one identified content (**Ben-Shaul**: paragraph [0063], extract information regarding local food and cookware stores when a cook book is requested).

As per **claim 27**, **McHenry-Furusawa-Ben-Shaul-Sanfilippo** disclosed the method according to claim 24 comprising the steps of:

identifying identified information comprising at least usage information provided by said surrogate servers ((**McHenry**: paragraph [0031], "user access frequencies"; and **Ben-Shaul**: paragraph [0054], statistics collection and reporting);

matching said additional information with said category information provided by said first database (**Ben-Shaul**: paragraph [0063], finding related information, i.e., matching content requested with category information; same matching method can be used for content frequently requested as well);

generating at least one class template comprising said matched information (**Ben-Shaul**: paragraph [0070], distribution policies change dynamically based on characteristic of differentiated content; the discloses identifies "class template" as "content distribution events/actions based on triggered policies for distributing the contents or for modifying the distribution policies);

adding to said class template said contents information provided by said second database (**Ben-Shaul**: paragraph [0069] [0070], policies (and new policies) are stored on origin site, a database has to be inherently included for the storage); and

forwarding said at least one modified class template to a distribution system (**Ben-Shaul**: paragraph [0069], the edge servers get updates on their

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policies from the origin site, i.e., the new policies are forwarded to the edge servers from the origin site).

As per **claim 28, McHenry-Furusawa-Ben-Shaul-Sanfilippo** disclosed the method according to claim 27 wherein said step of adding to said class template said contents information provided by said second database comprises the steps of:

accessing a class template repository (**Ben-Shaul**: paragraph [0069] [0070], policies (i.e. classes) (and new policies) are stored on origin site, a database has to be inherently included for the storage, the policy repository has to be accessed for the change to be recorded); and

modifying said class template according to said content information (**Ben-Shaul**: paragraph [0069] [0070], policies (and new policies) are stored on origin site, a database has to be inherently included for the storage).

As per **claim 34, McHenry-Furusawa-Ben-Shaul-Sanfilippo** disclosed a non-transitory computer readable medium encoded with a computer program product loadable into a memory of at least one computer, the computer program product comprising software code portions for performing the method of claim 18 (the rationale of rejection and reasons of obviousness have been noted in the rejection of claim 18 above and applicable herein).

7. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **McHenry** in view of **Furusawa, Ben-Shaul** and **Sanfilippo** as applied to claim 18 above, and further in view of **US Pat. No. 6,829,613 B1** to **Liddy** (Cited in previous office action, hereinafter **Liddy**).

As per **claim 19, McHenry-Furusawa-Ben-Shaul-Sanfilippo** disclosed the method according to claim 18; although **McHenry-Furusawa-Ben-Shaul-Sanfilippo** does not explicitly disclose the step of calculating semantics affinity comprising step of involving the use of data mining or artificial intelligence mechanisms, in an analogous art in electronic content providing, **Liddy** disclosed a method and system that calculating semantics affinity involves the use of artificial intelligence mechanisms (**Liddy**: col. 13, line 61 - col. 14, line 7, “decision tree” is an artificial intelligence mechanism), it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of **McHenry-Furusawa-Ben-Shaul-Sanfilippo** to further incorporate the using of artificial intelligence mechanisms for calculating semantics affinity from **Liddy**, the motivation being for increase ease of use, because what method to use for calculating semantics affinity is just a matter of implementation choice.

As per **claim 20, McHenry-Furusawa-Ben-Shaul-Sanfilippo-Liddy** disclosed the method according to claim 19, wherein said mechanisms comprise at least a mechanism selected from neural networks, fuzzy logic and decision trees (**Liddy**: col. 13, line 61 - col. 14, line 7, decision tree).

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over **McHenry** in view of **Furusawa, Ben-Shaul** and **Sanfilippo** as applied to claim 18 above, and further in view of **US PG-PUB No. 2002/0062300 A1** to **Asadov et al.** (Cited in previous office action, hereinafter **Asadov**).

As per **claim 21, McHenry-Furusawa-Ben-Shaul-Sanfilippo** disclosed the method according to claim 18; although **McHenry-Furusawa-Ben-Shaul-Sanfilippo** does not explicitly disclose using of searching engines in the step of identifying a reference content, in an analogous art in electronic content providing, **Asadov** disclosed a method and system where search engines are used for identifying document by content (**Asadov**: paragraph [0020], [0050], search agents are used for identifying document by semantics); it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of **McHenry-Furusawa-Ben-Shaul-Sanfilippo** to further incorporate the search agents (search engines) from **Asadov**, the motivation being for improved system efficiency.

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over **McHenry** in view of **Furusawa, Ben-Shaul, Sanfilippo** and **Asadov** as applied to claims 18 and 21 above, and further in view of **US PG-PUB No. 2002/0188681 A1** to **Gruen et al.** (Cited in previous office action, hereinafter **Gruen**).

As per **claim 22, McHenry-Furusawa-Ben-Shaul-Sanfilippo-Asadov** disclosed the method according to claim 18, wherein said step of identifying for each category at least a reference content comprises the steps of:

identifying a set of reference contents by using search engines (**Asadov**: paragraph [0020], [0050], search agents are used for identifying document by semantics; see motivation in the rejection of claim 21 above);

Although **McHenry-Furusawa-Ben-Shaul-Sanfilippo-Asadov** does not explicitly disclose calculating a central reference content, in a analogous art in providing electronic content, **Gruen** disclosed a method and system where a centroid document (i.e. central reference content) is calculated for a set of documents (**Gruen**: paragraph [0039], computing a centroid document for a cluster of documents); it would have been obvious to one of ordinary skill in the art at the time of the invention, to modify the system of **McHenry-Furusawa-Ben-Shaul-Sanfilippo-Asadov** to further incorporate the calculating central reference content from **Gruen**, the motivation being for increased system efficiency and accuracy for categorizing documents.

### ***Conclusion***

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINGLAN EDWARDS whose telephone number is (571)270-5440. The examiner can normally be reached on 6:00AM-3:30PM EST Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ashokkumar B. Patel can be reached on (571) 272-3972. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.



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/L. E./

Examiner, Art Unit 2491

/Ashok B. Patel/

Supervisory Patent Examiner, Art Unit 2491